



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,174	10/13/2006	Bruno Pasquale Franco Nardo	01213/0203491-US0	1175
25764	7590	11/17/2010		
FAEGRE & BENSON LLP PATENT DOCKETING - INTELLECTUAL PROPERTY 2200 WELLS FARGO CENTER 90 SOUTH SEVENTH STREET MINNEAPOLIS, MN 55402-3901				
EXAMINER				
HAYMAN, IMANIN				
ART UNIT		PAPER NUMBER		
3767				
NOTIFICATION DATE		DELIVERY MODE		
11/17/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

djohnson2@faegre.com

rhale@faegre.com

PatentDocketing@Faegre.com

Office Action Summary

Application No.

10/553,174

Applicant(s)

NARDO ET AL.

Examiner

IMANI HAYMAN

Art Unit

3767

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

In response to the Amendment filed 28 September 2010, claims 1-23 are cancelled.

Claims 24-28 are newly added. Claims 24-28 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussman et al. (US Patent No. 5,368,555) in view of Ohta et al. (US Patent No. 6,336,910 B1).

Regarding claim 24, Sussman et al. discloses the invention substantially as claimed for an apparatus (1) configured to assist in regeneration of a liver of a patient by providing oxygenated blood to the liver (column 4, line 65 to column 5, line 67), the apparatus comprising: a first catheter (column 7, lines 35-39) configured to be fluidly coupled with a femoral artery of the patient (the catheter is sized to fit venously; column 7, line 39); a second catheter (column 7, lines 35-39) configured to be fluidly coupled with a portal vein of the patient (the catheter is sized to fit venously; column 7, line 39); and an extracorporeal circuit (figure 1) fluidly connected between the first catheter and the second catheter such that arterial blood may flow into the first catheter, pass through the extracorporeal circuit and return to the patient through the second catheter (figure 7), the extracorporeal circuit including: an oxygenation device (60) configured to be fluidly connected to a source of oxygen and to provide oxygen to blood flowing through the extracorporeal circuit; and a control device (column 6, lines 35-40) configured to measure a partial pressure of molecular oxygen in the blood flowing through the extracorporeal circuit and to provide feedback control to regulate a quantity of oxygen being provided to the oxygenation device (column 6, lines 35-40; column 10, line 38 to column 11, line 13). However, Sussman et al. fails to disclose measuring hematocrit. Ohta et al. discloses a control device configured to measure a hematocrit (column 6, lines 13-19). Hence, it would have been obvious to one of ordinary skill in the

art to modify the device of Sussman et al. with the blood concentration unit as taught by Ohta et al. for metering and concentrating diluted blood to obtain a hematocrit value.

Regarding claim 25, Sussman et al. discloses the apparatus of claim 24 substantially as claimed, however fails to disclose a heater. However, Ohta et al. discloses a coil heater (heat exchanger) configured to maintain a temperature of blood flowing through the extracorporeal circuit (column 3, lines 51-52; column 4, line 49). Hence, it would have been obvious to one of ordinary skill in the art to modify the device of Sussman et al. who teaches monitoring temperature (column 11, lines 5-6) with the heat exchanger as taught by Ohta et al. to warm concentrated blood.

Regarding claim 26, Sussman et al. discloses the apparatus of claim 24, further comprising a device configured to provide anticoagulants to the blood flowing through the extracorporeal circuit (column 16, lines 45-61).

Regarding claim 27, Sussman et al. discloses the apparatus of claim 24, further comprising a hemofiltration device configured to remove water from the blood flowing through the extracorporeal circuit (column 6, lines 1-22).

Regarding claim 28, Sussman et al. discloses the apparatus of claim 24, further comprising a drip chamber (10) configured to remove air bubbles from the blood flowing through the extracorporeal circuit (column 18, lines 43-61).

Response to Arguments

5. Applicant's arguments with respect to claims 24-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IMANI HAYMAN whose telephone number is (571)270-5528. The examiner can normally be reached on **MONDAY THRU FRIDAY 7:30 AM TO 5:00 PM EST**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KEVIN SIRMONS can be reached on 571-272-4965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/I. H./
Examiner, Art Unit 3767
/KEVIN C. SIRMONS/
Supervisory Patent Examiner, Art Unit 3767